IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Michael D. Whitesage

Application No.: 09/764,178

Group Art Unit: 3623

Filed: January 17, 2001

Examiner: Andre Boyce

For: System and Method for Managing Purchasing Contracts

AFFIDAVIT OF MICHAEL WHITESAGE UNDER RULE 131 TO ANTEDATE REFERENCE WITH EFFECTIVE DATE OF FEBURARY 16, 2000

Assistant Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Michael Whitesage, being duly sworn, deposes and says:

1. My name is Michael Whitesage. I currently reside in Incline Village, Nevada.

2. I am the President of Prism Group, Inc., which has a principle place of business in Incline, Nevada and formerly, a principle place of business at 10131 Coors Road, Suite 520, Albuquerque, New Mexico.

3. a. I have reviewed U.S. Utility Patent Application Ser. No. 09/764,178 filed January 17, 2001 (the "Patent Application") and confirm that I am the sole inventor of the subject matter described therein and originally claimed.

b. I have reviewed U.S. Provisional Patent Application Ser. No. 60/194,538, filed April 4, 2000 (the "Provisional Application") and confirm that I am the sole inventor of the subject matter described therein.

c. I have reviewed the claims currently pending in the Patent Application, and confirm that I am the inventor of the subject matter claimed.

4. The invention described and claimed in the Patent Application and described in the Provisional Application were conceived by me and completed prior to February 16, 2000 and as early as January 26, 2000, as evidenced by the following:

a. I spoke with Jim Repass of the law firm of Fulbright & Jaworski, LLP on January 26, 2000 regarding the preparation of a patent application on my invention. The invention I had in mind at this time was the invention later described in the Provisional Application. Exhibit A is an e-mail dated January 26, 2000 (after a teleconference with Mr. Repass) that indicates that the subject matter of my teleconference with Mr. Repass was a "patent application" relating to a process that "manages contracted purchasing relationships." The e-mail also indicates that a "description of the process" was attached to the e-mail.

b. The four-page document attached herewith as Exhibit B and entitled "Contract Management Processes" was authored by me as early as January 26, 2000. I believe that I attached this document to an e-mail on January 26, 2000 to Fulbright & Jaworski, LLP (Exhibit C: "Process Description"). Exhibit D is an e-mail of the same date indicating receipt of the materials by James Repass of Fulbright & Jaworski, LLP. The document of Exhibit C is also referenced in the e-mail of Exhibit A ("attached description"). I am informed by Alberto Amatong of The Morris Law Firm, P.C. that Exhibits A, B, C, and D were found next to each other in my patent application file at The Morris Law Firm, P.C., which I believe confirms my understanding that the document of Exhibit B was e-mailed on January 26, 2000 and thus, was created on or before that date. The document of Exhibit B identifies and describes the stages of a process that embodies the invention, both the "business process" side and the "data process" side.

c. The documents entitled "Automated Contract Managing: A Business Process and Data Format", "Contract Management Illustration," and "Contract Management Outline" (Exhibit E) were authored by me as early as January 27, 2000. I am informed by Alberto Amatong that these documents were clipped together in my patent application file at The Morris Law Firm, P.C. These documents provide a summary, illustration and outline of the invention as understood by me on that date. I believe that the handwritten notes on the document were made by an attorney at Fulbright & Jaworski, LLP. I believe that these documents were attached with my e-mail of January 27, 2000 to Jim Repass of Fulbright & Jaworski, LLP (Exhibit F) and referenced therein as "attached materials." The e-mail of January 27, 2000 also reflects that I had contacted an Elliot Greenwald to conduct a prior art search for my invention. I am informed by Alberto Amatong that the e-mail of Exhibit F was clipped in my patent application at The Morris Law Firm, P.C. next to the documents of Exhibit E, further confirming that the documents were the "attached materials" referenced in the e-mail.

d. I am informed by Alberto Amatong that the two pages of notes dated January 26, 2000, attached herewith as Exhibit G, was filed in my patent application file at The Morris Law Firm, P.C. These notes indicate information describing the invention that I was conveying to Jim Repass of Fulbright & Jaworski, LLP during our teleconference on January 26, 2000. This noted information is consistent with information on the documents of Exhibits B and E.

e. The document attached herewith as Exhibit H and entitled "System and Method for Establishing and Managing Volume Contracted Purchasing Agreements Using Computerized System" was authored by me as early as March 8, 2000. A facsimile of the document was transmited from Prism

Group, Inc. to Alberto Amatong of Fulbright & Jaworski, LLP on March 8, 2000. The subject matter of this document was known and understood by me as early as January 26, 2000. This document was prepared by me for the purpose of elaborating on the invention which I brought to the attention of Fulbright & Jaworski, LLP as early as January 26, 2000.

f. After further review of the documents "Contract Management Processes" (Exhibit B), "System and Method for Establishing and Managing Volume, Contract to Purchasing Agreement Using Computerized System" (Exhibit H), and the documents of Exhibit E and the e-mails and notes described above, it is my belief that these documents and materials describe the invention that is described in Provisional Application No. Ser. No. 60/194,538.

6. Prior to January 26, 2000, my company Prism Group, Inc. and I had developed working software that implemented the processes described in the documents of Exhibits B, E, and H and in the Provisional Application.

7. Between January 26, 2000 and April 8, 2000, I worked diligently with patent attorneys at Fulbright & Jaworski, LLP to complete a patent application filing with the United States Patent and Trademark Office. This included generating the document entitled "Contract Management Processes" (Exhibit H), communicating with the attorneys by phone or e-mail, and reviewing drafts of the patent application.

8. I have reviewed Exhibits A-H which are attached to this Affidavit, as well as the Provisional Application, the U.S. Utility Patent Application, and the pending claims of the U.S. Patent Application.

9. Exhibits B, E, and H are documents created by me in the United States. The activities reflected in paragraphs 1-8 above and relied upon in this Affidavit also occurred in the United States.

Signature: _____ Date: 8-12-05
Michael Whitesage

Subscribed and sworn to before me, this 12 day of Aug, 2005.

[Notary Seal:]

TAMMY M. MERSICH
NOTARY PUBLIC
STATE OF NEVADA
APPT. No. 04-87122-2
MY APPT. EXPIRES FEB. 18, 2008

NOTARY PUBLIC

My commission expires: 2-18-, 2008.

From: "Michael Whitesage" <michael@prism-grp.com>
To: "Jim Repass (E-mail)" <jrepass@fulbright.com>
Date: 1/26/00 4:07PM
Subject: Patent Application

Jim,

I enjoyed talking with you and look forward to working with you on the proposed patent application. I have contacted Terry and put a call into Mr. Greenwald. I have also attached the description of the process that we propose.

I believe that we are applying for a type of transaction that is qualified by the buyer, seller, and contract term created by a computer process. These new data are then used in a new business process which manages the contracted relationship with a customer. I believe that the approach has broader application than for the airline industry and can be applied to any contracted purchasing relationship measured by individual transactions.

I will look forward to receiving your materials. Thank you for you assistance.

Michael

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FAX: +1-505-897-7898
email: michael@prism-grp.com
web: www.prism-grp.com

A

B

Contract Management Processes

Business Process	Data Process
1. Identify Customer	
Establish business entity. This will be the entity that contracts with the customer.	Load business data into database. Enter entity data: legal name, address, phone, email, and web site.
Identify business employees responsible for contracted business relationships. Assign function and hierarchical position to each employee. ▪ Sales ▪ Supervision ▪ Contracting ▪ Payment	Load employee data into contact database. Assign keys for function hierarchical "reports to" position. Enter contact data: name, address, phone(s), personal information for work and home.
Establish customer entity. This will be the entity that contracts with the business.	Load customer data into database. Classify customer by corporate division, industry, and sales region. Enter entity data: legal name, address, phone, email, web site, and tax number.
Assign employee to potential customer	Link sales employee key to potential customer entity key. Assign sales role to employee.
Identify contacts within potential customer	Load contacts with potential customer into contact database. Enter contact data: name, address, phone(s), personal information for work and home.
Collect historical transaction data	Collect data from source(s): customer, third-party agent, or supplier
Normalize data	Load data into temporary database. Create one row of data per unit in a standard format. ▪ product description ▪ count ▪ amount ▪ time ▪ sold by ▪ computed share
Load data	Load data into transaction database
2. Qualify Customer Contract	
Assign a unique number for the contract	Create unique key for each contract within contract

	database

Define contract term(s) and assign unique number for each term	Create and store SQL statement that describes each term:
	▪ Discount
	  ▪ Amount
	  ▪ Percent
	▪ Date range
	▪ Requirement
	  ▪ Product
	  ▪ Count
	  ▪ Amount
	  ▪ Share

Create SQL statement to mark records that meet requirements of term	Generate SQL statement that matches records that meet the term definition. Store in Term database
Assign unique number to each term	Create unique key for each term within contract. Store in Term database
Qualify the financial results of term using historical data	Compute current: ▪ Total count ▪ Total amount ▪ Share ▪ Unit cost Compute future yield: ▪ Old revenue ▪ New revenue ▪ Net revenue
Determine net income from term	Compute net income from net revenue and incentives
Model financial impact of incentives	Compute financial cost of cash or in-kind incentives
Store projected financial results	Store projected financial results in Term database
Qualify each term until all terms have been defined	
Compute financial results of combined discount and incentive terms	Compute incremental profit summing results of each term ▪ Amount ▪ Percent

Determine if contract is viable	Apply rules to determine viability of contract
If viable, approve contract	Log request for draft contract approval
2. Contract	
Produce contact and term sheet	Produce contract Agreement and Terms Attachment using Term SQL Statements
Sign and register contract	Log contract signature requirement. Record contract signed to activate contract on date
3. Monitor	
Collect transaction data for all contracted purchases	
Normalize data	Normalize data. Load data into temporary database. Create one row of data per unit: ▪ description ▪ count ▪ amount ▪ time
Load data	Load data into transaction database
Assign a unique number for the contract and contract term	Identify and mark each transaction with unique contract and term key using Term SQL statement
Create summary transaction data by month, data source, customer, contract	Compute summary transaction data by ▪ month ▪ data source ▪ customer ▪ contract ▪ term Compute: ▪ count ▪ amount ▪ share Load data in Summary database
Compute average interim term performance	Compute averages: monthly variance, year to date variance. Load in Summary database

Determine interim term fulfillment	Compare term requirement with monthly performance. Mark Summary database Y/N whether term has been fulfilled.
Notify account manager of interim term performance	Produce and distribute term performance summary to account manager
Notify customer of interim term performance	Produce and distribute term performance summary to customer
If term is failing then modify contract: ▪ modify term ▪ cancel term ▪ cancel contract	
4. Fulfillment	
Compute average final term performance	Compute averages: monthly variance, year to date variance. Load in Summary database
Determine final term fulfillment	Compare term requirement with monthly performance. Mark Summary database Y/N whether term has been fulfilled.
Notify account manager of interim term performance	Produce and distribute term performance summary to account manager
Notify customer of interim term performance	Produce and distribute term performance summary to customer
Authorize Payment	Produce authorization for incentive payment
Compare account manager's performance to goal	Produce and distribute report to measures account manager's performance compared to goal
Final contract performance and reconciliation	Produce and distribute final contract performance and reconciliation report

From: "Michael Whitesage" <michael@prism-grp.com>
To: "Jim Repass (E-mail)" <jrepass@fulbright.com>
Date: 1/26/00 4:07PM
Subject: Process Description

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10131 Coors Road, Suite 520
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c

From: James Repass
To: "michael@prism-grp.com".GWIA.Gateways
Date: Thu, Jan 27, 2000 6:30 PM
Subject: Re: Materials

I will review the materials and let you know if I need additional info. Your understanding is correct regarding international filing.

Jim

Automated Contract Management :
A Business Process and Data Format

E

Summary

This is an apparatus, method, and program for ~~the management of~~ managing contracted purchasing relationships. By storing and processing transactions, a company or customer can (1) identify transactions that apply to a contract, (2) determine the financial return of a proposed contracted relationship, (3) produce the contract and terms, (4) monitor the performance of each term and thereby the contract, and (5) produce information for payment.

The patent PRISM is seeking is (1) for a *business process* , the management of contracted purchasing relationships using transaction data; and (2), for the creation of a *data format* that applies unique contract information to the transaction record.

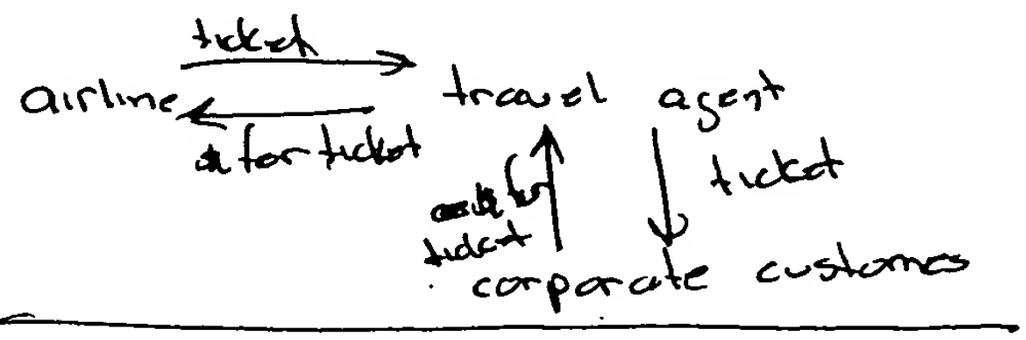
Process Overview

The specific application is used in the travel industry where airline acquire ticket data from travel agencies for their corporate customers. These data are then normalized into a common format and to identify the customer and persons responsible for the account within the airline.

Once the data have been stored, they are used to model the potential financial return of the contract. Using the computer to construct contract terms, terms are applied to the appropriate ticket. After the terms of the contract are agreed upon, a hard copy of the contract terms is automatically produced.

The computer then uses the contract terms to mark new tickets as they are loaded into the computer. Marking the records by term enables the on-gong monitoring of the deal.

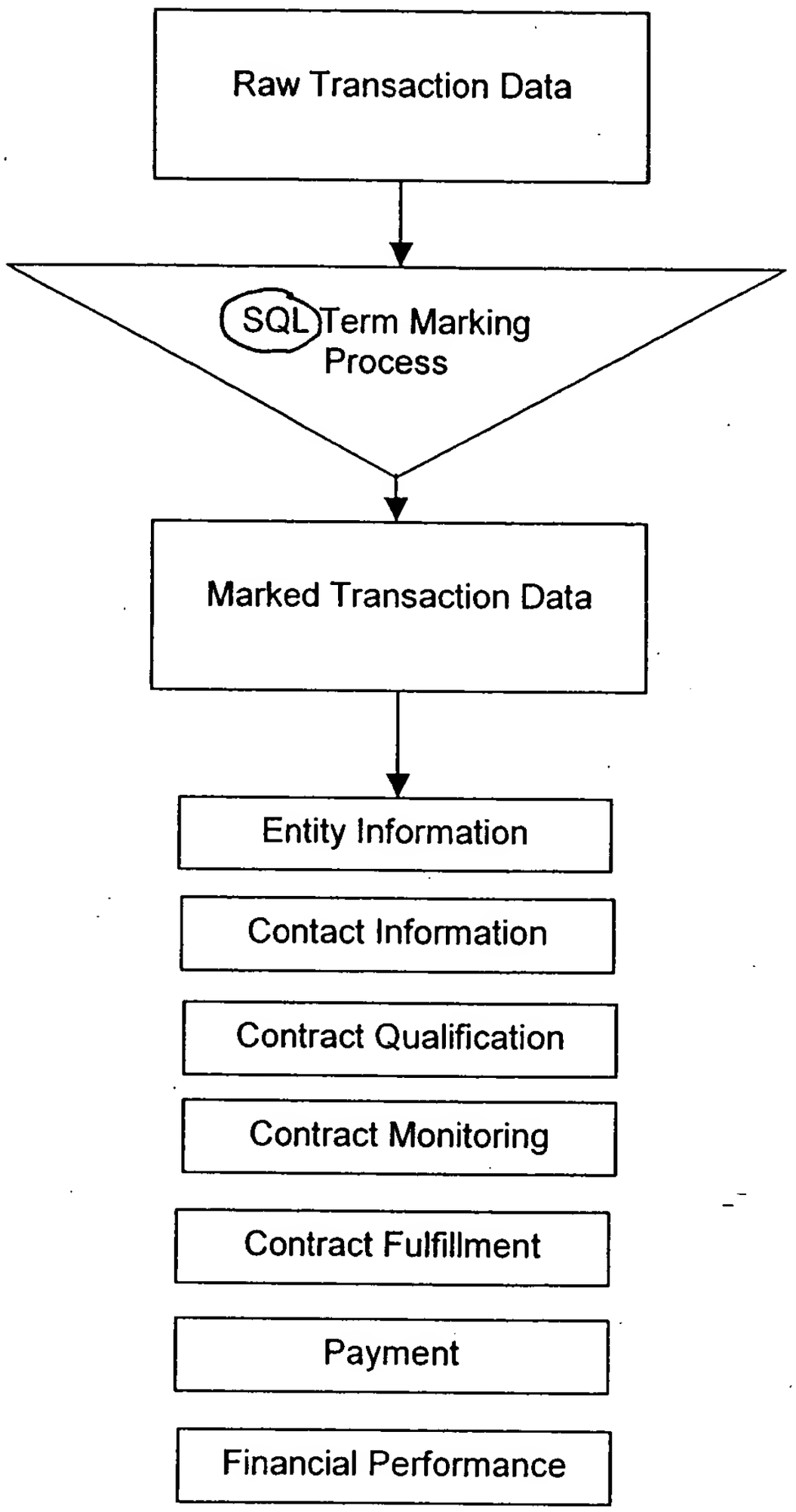
At the completion of the contract period, the data may be accessed to verify which terms have been fulfilled. The ticket amounts and counts may then be used to compute the amount of payment to the customer and recap the financial performance of the deal.



Steps

1. acquisition of data from data source
2. normalization of acquired data into a common format
3. select specific data from normalized database
4. model potential financial contract return using selected data.
5. input contract terms
6. mark new tickets based upon contract terms to verify fulfillment of contract term
7. computation of payment to customer based upon ticket counts and amounts
8. recap performance of deal.

Contract Management Illustration



Contract Management Outline

1.0 Gather Information

- 1.1 Business entity
  - 1.1.1 Business employee contacts
  - 1.1.2 Classify business products
- 1.2 Customer entity
  - 1.2.1 Customer employee contacts
  - 1.2.2 Classify customer

2.0 Establish Contract

- 2.1 Determine contract requirements
  - 2.1 Entity and contact information
  - 2.2 Term requirements
  - 2.3 Store Term as SQL statement

3.0 Establish transaction database

- 3.1 Normalize data for multiple sources
- 3.2 Create transaction database
- 3.3 Use SQL statements to mark data
  - 3.3.1 Associate entities to transaction
  - 3.3.2 Mark contract and term
- 3.4 Create term summary database
  - 3.4.1 Compute term count, amount, and share
  - 3.4.2 Compute variance to term requirement
  - 3.4.3 Determine term fulfillment (Y/N)

4.0 Employ contract data for decision support

- 4.1 Qualify customer for contract
  - 4.1.1 Mark transactions that qualify for term
  - 4.1.2 Compute historical performance
  - 4.1.3 Produce models for financial performance of terms and contract
  - 4.1.4 Produce contract term requirements

4.2 Monitor contract performance

- 4.2.1 Mark transactions that qualify for term
- 4.2.2 Compute current performance
- 4.1.3 Compute summary term database
- 4.1.4 Produce reports measuring term performance

4.3 Pay discounts based on contract performance

- 4.3.1 Determine transactions that quality for term
- 4.3.2 Computer discount
- 4.3.3 Pay discount to customer
- 4.3.4 Produce payment reconciliation reports

4.4 Measure contract performance

- 4.4.1 Sales employees measured to goals
- 4.4.2 Contract financial performance

From: "Michael Whitesage" <michael@prism-grp.com>
To: "Jim Repass (E-mail)" <jrepass@fulbright.com>
Date: 1/27/00 5:51PM
Subject: Materials

Jim,

I contacted Elliot today and sent him the attached materials for his search. He agreed to have the search done before Friday, Feb 18. I will keep on him to ensure that he hits the target.

Since this application is for airlines, I am particularly interested in extending the patent internationally. I understand from my last year that the patent can be filed in other countries within one year of its approval in the US.

Please let me know if you need further information.

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Identify business employees responsible for contracted business relationships. Assign function and hierarchical position to each employee. ▪ Sales ▪ Supervision ▪ Contracting ▪ Payment	Load employee data into contact database. Assign keys for function hierarchical "reports to" position. Enter contact data: name, address, phone(s), personal information for work and home.
Establish customer entity. This will be the entity that contracts with the business.	Load customer data into database. Classify customer by corporate division, industry, and sales region. Enter entity data: legal name, address, phone, email, web site, and tax number.
Assign employee to potential customer	Link sales employee key to potential customer entity key. Assign sales role to employee.
Identify contacts within potential customer	Load contacts with potential customer into contact database. Enter contact data: name, address, phone(s), personal information for work and home.
Collect historical transaction data	Collect data from source(s): customer, third-party agent, or supplier
Normalize data	Load data into temporary database. Create one row of data per unit in a standard format. ▪ product description ▪ count ▪ amount ▪ time ▪ sold by ▪ computed share
Load data	Load data into transaction database
2. Qualify Customer Contract	
Assign a unique number for the contract	Create unique key for each contract within contract

	database
Define contract term(s) and assign unique number for each term	Create and store SQL statement that describes each term: ▪ Discount ▪ Amount ▪ Percent ▪ Date range ▪ Requirement ▪ Product ▪ Count ▪ Amount ▪ Share
Create SQL statement to mark records that meet requirements of term	Generate SQL statement that matches records that meet the term definition. Store in Term database
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Determine net income from term	Compute net income from net revenue and incentives
Model financial impact of incentives	Compute financial cost of cash or in-kind incentives
Store projected financial results	Store projected financial results in Term database
Qualify each term until all terms have been defined	
Compute financial results of combined discount and incentive terms	Compute incremental profit summing results of each term ▪ Amount ▪ Percent

Determine if contract is viable	Apply rules to determine viability of contract
If viable, approve contract	Log request for draft contract approval
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Produce contact and term sheet	Produce contract Agreement and Terms Attachment using Term SQL Statements
Sign and register contract	Log contract signature requirement. Record contract signed to activate contract on date
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Notify account manager of interim term performance	Produce and distribute term performance summary to account manager
Notify customer of interim term performance	Produce and distribute term performance summary to customer
Authorize Payment	Produce authorization for incentive payment
Compare account manager's performance to goal	Produce and distribute report to measures account manager's performance compared to goal
Final contract performance and reconciliation	Produce and distribute final contract performance and reconciliation report

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web: www.prism-grp.com

F

LAB is working ON

- will do search : contact E. Greenwald
- will do in parallel
- conflicts, letter of engagement

- Prism Group, Inc.
- Michael Whitsage - inventor
10131 Coors Rd.
Suite 520
Albuquerque 87114
michaelb@prism-grp.com

- $5000 -

G

t/c w/ Michael Whitcsagh (505-897-7802)
26 Jan. 00

- data mining
  - takes transaction data and applies to contract

- create Igen a record that is qualified by k term

PRISM Group Inc.

Date 8 March, 2000

Number of pages including cover sheet 8

TO: Albert Amatong
Phone
Fax Phone 713-651-5301

H

FROM: *Michael Whitesage*
10131 Coors Road NW
Suite 520
Albuquerque, NM 87114
Phone *505-897-7800*
Fax Phone *505-897-7898*

REMARKS: ☐ *Urgent* ☐ *For your review* ☐ *Reply ASAP* ☐ *Please Comment*

Attached.

SYSTEM AND METHOD FOR ESTABLISHING AND MANAGING VOLUME, CONTRACTED PURCHASING AGREEMENTS USING COMPUTERIZED SYSTEM

Inventor: Michael Whitesage

Assignee: PRISM Group, Inc.

ABSTRACT

A system, process, and program for the management of volume, contracted purchasing agreements in an electronic environment. By creating, storing and processing contract-designated transactions with the invention, a supplier, or customer, can identify and mark transactions that apply to a contract, forecast the financial performance of a contracted relationship, produce the contract and contract terms, monitor the fulfillment of the contract terms, pay discounts based upon actual purchasing performance, and reconcile final contract performance to the prediction model.

BACKGROUND

Businesses reward customer volume buying with discounts or deals. Contracted deals comprise one or more purchasing requirements, or terms, for volume buying. Terms may include commitments for the purchase of a specified number of units, or the expenditure of a monetary amount, or that the designated share of a company's purchasing be dedicated to a specified supplier. Each party, supplier and customer, seeks financial gain from the deal. For the supplier, increased volume means higher unit sales and profits; for the customer, discounts mean lower costs.

In the global business setting, suppliers often form alliances to provide services to a customer worldwide. Alliance deals comprise complex terms from two or more suppliers. Suppliers and customers benefit from alliance deals. Suppliers extend their services into markets that they do not serve. Customers consolidate their global purchasing volume to benefit from worldwide discounts with a reduced number of suppliers.

In an electronic environment where products are purchased through computerized systems, however, deals are difficult to formulate, manage, and measure. First, a supplier may have more than one distributor from which a customer may purchase products. Second, suppliers and distributors, often located in different parts of the world, use different systems that produce incompatible electronic transactions. Third, the distributor may not know that the customer has a deal with a supplier. And fourth, recording which transactions qualify for the discount is lacking or depends upon unreliable processes requiring upon manual input.

Suppliers find it difficult to measure contract performance for bulk purchases over a period of time. They often rely upon reports or data provided by the customer. The reports results may not correspond to the terms of the deal. Or, data may be required to be input into a secondary system. Company auditors also question the business case for relying upon results provided by customers.

These problems describe the purchasing environment of the airlines. Airlines contract deals with companies for the volume purchase of airline seats at discounted prices for business travelers. The terms of these deals may require commitments for the purchase of a specified number of seats, or the expenditure of a monetary amount, or

the designated share of a company's purchasing to be dedicated to the airline. Deals comprise large financial commitments in consideration of sizable ticket-price discounts.

Airlines are also extending their reach to new markets by forming airline alliances comprised to two or more carriers. Airlines within an alliance may "code-share," a term that describes the practice of the operating airline using the flight number of its alliance partner in addition to its own. While a traveler's itinerary may show one airline to a destination, more than one airline may be actually flown. In a multinational setting, deals often apply to code-share flights.

Airlines distribute their products, airline seats, through electronic systems such as Global Distribution Systems or Internet booking portals. Tickets may be purchased through any one of thousands travel agent ticketing locations located around the world. While ticket data may be collected in airline revenue accounting systems or in travel agent accounting systems, there are many such systems producing incompatible data formats. Agents may not know that a traveler is qualified for a corporate discount. When they do, identifying tickets that qualify for discounts is accomplished through the input of a unique number. Since this input is manual, it is subject to error.

Airlines find it difficult to measure contract term fulfillment. Airline sales departments often depend upon reports or data provided by the customer. Auditors question the conflict of interest of measures provided by the customers.

When data are acquired, they are difficult to use because segments data used by airlines often do not reflect the traveler's destination, it is difficult to match the term to the vast number of tickets purchased, and there is no means of automatically measuring the count of seats, amount of expenditure, or airline's share of business.

It has been noted that as many as half of all contracted terms fail. Non-performing contracts dilute airline revenues and profits. Non-performing contracts also hurt the airline's best customers but siphoning discounts from performing customers to companies that have not meet their contract commitments.

SUMMARY OF THE INVENTION

The problems described above are in large measure solved by the present invention. The invention disclosed herein provides the computerized means of creating transactions for the qualification, monitoring, and paying on contracted, volume purchasing agreements. First, the invention provides a new class of transaction data that identifies the sales relationships embodied in the contract and the contract term purchasing requirements. Second, the invention provides new business processes for the qualification, monitoring, and payment of contracted discounts in an automated environment in which purchases are made electronically.

The invention relies upon computerized systems for the automation of contract management. The invention comprises nine stages: (1) identify and record information on business entities and contacts; (2) define rules for minimum and maximum financial performance for the term and the contract; (3) acquire and normalize historical customer purchasing data; (4) program contract terms and forecast financial performance of the term and contract; (5) produce contract and term requirement documents; (6) mark current transactions by unique contract and term codes and produce database to analyze terms; (7) produce and distribute performance information to supplier and customer staff; (8) pay discounts to customer; and, (9) reconcile term requirements to term performance at the end of the contract.

When a supplier and a customer first discuss the possibility of a deal, the business entities in the proposed deal are identified. Entities include the corporate

customer, the airline, and the airline's potential alliance partners. Facts on each party are required for the contract such as legal business name, address, and tax number. The invention stores these data in an Entity database. While contracts are between entities, individuals are responsible for the management of the contract. Airlines assign individuals who are responsible for sales, customer management, and contracting. Likewise, companies assign individuals who are responsible for purchasing and contracting. The invention stores information on these individuals in the Contact database.

Once the parties have agreed on their intent to negotiate a deal, the customer provides the supplier with detailed data for each purchase. Often these data are from disparate sources and arrive in incompatible formats. The invention sequesters these data into a temporary database before it normalizes the data into a common transaction format. Data may reflect components of the actual purchase in which case the components must be constructed to reflect the actual purchase. Or data may reflect a transaction that comprises more than one product in which case the transaction must be deconstructed to identify the product. The common transaction requires the following data elements: a descriptive code of the item purchased at the term level; the date and time of purchase; count of units of purchased; net and gross amount of the purchase; supplier's unique code; and, the distributor's unique code.

Airline data are derived from travel agencies, Global Distribution Systems, third-party data consolidators, or the airline's revenue accounting department. These data are exported from distributor's sales information systems in different formats. The first task of the invention is to normalize these data into the common transaction format. Airline systems store data as flight segments. Using standard industry practice, the many segments that comprise an itinerary are constructed into origin and destination rows reflecting the true destination the traveler. Or, a group transaction may include many travelers, in which case it is deconstructed to provide one transaction per traveler. Other databases are used to determine, or correct, the marketing and operating carrier, the actual price of the flight, and the arrival and departure times. Once the data are in the standard format, they are loaded into the Detail Transaction database. Refunds and exchanges are netted against their original transactions so an accurate transaction count is maintained. Once the data have been normalized, the data are now ready for contract term modeling and the qualification of financial performance.

Term qualification is conducted by matching the financial results to predefined rules. These rules are operator defined and include requirements for minimum or maximum purchase amounts, supplier share, or the number of units to be purchased. Once the rules have been defined, they are stored in the Term Rules database.

Purchasing contracts are agreements between supplier and customer. Performance requirements are stated as one or more Terms. The invention enables the user to program and store these terms in the computer as Structured Query Language (SQL) definitions or its machine language equivalent. Each term includes a unique title, beginning and ending date for which the term is effective, performance requirements, discount amount and method, special purchasing instructions, a user-defined code for the term, and identification of the distributors who are authorized to sell the product at the stated discount and how much they are compensated. Each contact is given a unique code; likewise, terms are given a unique code that groups them under the appropriate contract. SQL definitions for a term are stored in the Term Definition database. Using the Term Definition, the invention identifies and marks each transaction in the Transaction Detail database with its designated unique contract code and term code.

The invention provides airlines a method to store information on contracted purchasing relationships with their corporate customers. The contracts may be for domestic travel within one country or global deals for multiple countries or airlines. Using SQL, the invention enables the user to define Individual contract terms that provide for discounts to be paid for tickets booked to specified destinations. In addition to destination requirements, the user defines performance requirements. These include a commitment to purchase a specified monetary amount, or a specified number of flights, or deliver a specified share of business to the airline. In consideration of these commitments, the airline agrees to pay a discount. The invention enables the user to define the discount as a percent off of the actual fare, a monetary discount per ticket, or a designated flat fare. The airlines pay distributors, such travel agents and credit card companies commissions, to take reservations and sell airline tickets. The invention enables the user to define the term to include or exclude distributor commission. It also enables the user to define the ticketing locations that are permitted to sell tickets with the discount. Last, the invention enables the user to apply a unique airline code, or ticket designator, to the contract or to each individual term. Once the criteria for the term have been defined, the term is assigned to a contract and given a unique term code. It is then stored in the Term Definition database.

In an electronic environment where many purchases occur from many sources, and perhaps from many distributors, suppliers need to predict the financial performance, or profitability, of their contracts. Using criteria from the Term Definition database, the invention marks each transaction in the Transaction Detail database with its unique entity codes, contact codes, contract code and term code. In doing so, the invention has created a new class of data that ties the transaction to the various aspects of the contract. These contract-designed transaction data are then used to create unique business processes throughout the invention to qualify, monitor, pay discounts, and reconcile the financial performance of the deal.

In forecasting an airline's deal's financial performance, data from the Transaction Detail database are used to create the Transaction Summary database. From the Transaction Summary database, the computer makes calculations to determine by term the total number of flights, total amount spent, average transaction price, and supplier share. Financial measures are then computed to determine the profitability of the deal. Based upon these measures, the computer applies criteria from the Term Rule database to determine if the deal is rejected, or to be modified, or accepted. Using the sum of the financial performance of the terms, the computer forecasts the overall financial performance of the contract.

Once the terms and contract has been approved, the invention produces the contract including the document describing the parties' obligations and the terms. The computer produces a draft of the terms sheet from the Term Definition database written in standard language. If the customer requires changes in the terms, the airline can modify the term criteria and reanalyze the financial performance of the term and the contract. After both parties agree upon the terms, the final Term Definition database serves as the agreement for performance between the airline and the customer.

During the course of the contract, the customer agrees to provide data to the supplier to measure purchasing performance. These data are consolidated and normalized as described in detail earlier. As transactions are loaded into the transaction database, the computer executes a routine that employs the SQL term definitions to mark each term with its unique entity codes, contact codes, contract code and term code. The invention computes the summary totals for each term including the total unit count, total amount, supplier share for the period measured, and whether the term

requirements were met or not. These data are loaded in the Term Performance database.

The invention enables suppliers to measure customer contract performance by user-defined period such as month, quarter, and annually. Based upon the Term Performance database produced from data derived from the Transaction Detail database, the invention computes an analysis that provides the period average, contract-to-date average, and compares these amounts with the performance requirement. The invention then alerts the user of any non-performing term; that is, any term that is not meeting the requirements stated of the contract.

Airline customers take a discount either at the point-of-sale when a flight is booked or when the airline pays on the deal at the end of a designated term. The invention provides information to confirm that the term has been met, the amount of discount that has been taken at the point-of-sale, or the amount that is due to the customer at the end of the term.

Contract performance information is produced from the Term Performance database and is distributed to the contacts identified in the Contact database. These reports depict the performance status of each term and are distributed to both airline and customer contacts electronically and automatically.

At the end of the contract, the final performance of the terms is computed. The invention measures which terms the customer fulfilled and which terms failed including the variance and financial impact. Final financial performance of each term is compared to the Term Summary prediction model to depict how the next contract can be improved for airline and customer. Results are also compared to the goals stored Sales Goal database to measure sales performance. Results of this analysis are distributed electronically to the contacts in the Contacts database of the database.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an illustration of the databases in the invention.
FIG. 2 is an illustration of the data format that is produced.
FIG. 3 is a flow chart that illustrates the input of entities and contacts into the database.
FIG. 4 is a flow chart that illustrates the input of term rules in the database.
FIG. 5 is a flow chart that illustrates the data normalization processes.
FIG. 6 is a flow chart that illustrates the term definition and financial forecasting process.
FIG. 7 is a flow chart that illustrates the production of the contract and terms sheet.
FIG. 8 is a flow chart that illustrates the process to mark transactions with term codes.
FIG. 9 is a flow chart that illustrates the production and distribution of information.
FIG. 10 is a flow chart that illustrates the payment of discounts.
FIG. 11 is a flow chart that illustrates the final reconciliation of the terms and contract.

FIGURE 1:
COMPUTER PROCESSOR AND DATABASES

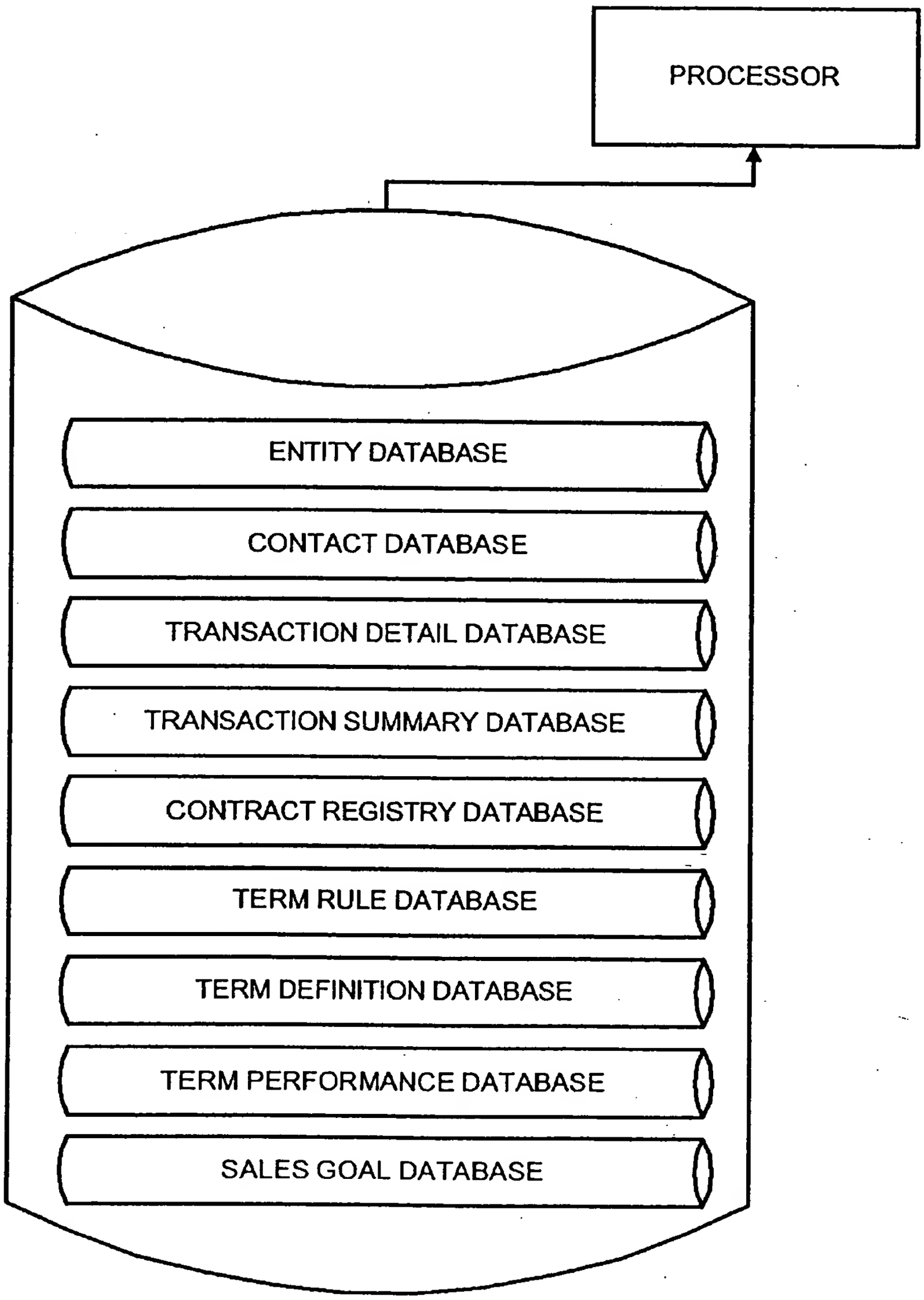

FIGURE 2:
CONTRACT-DESIGNATED TRANSACTION

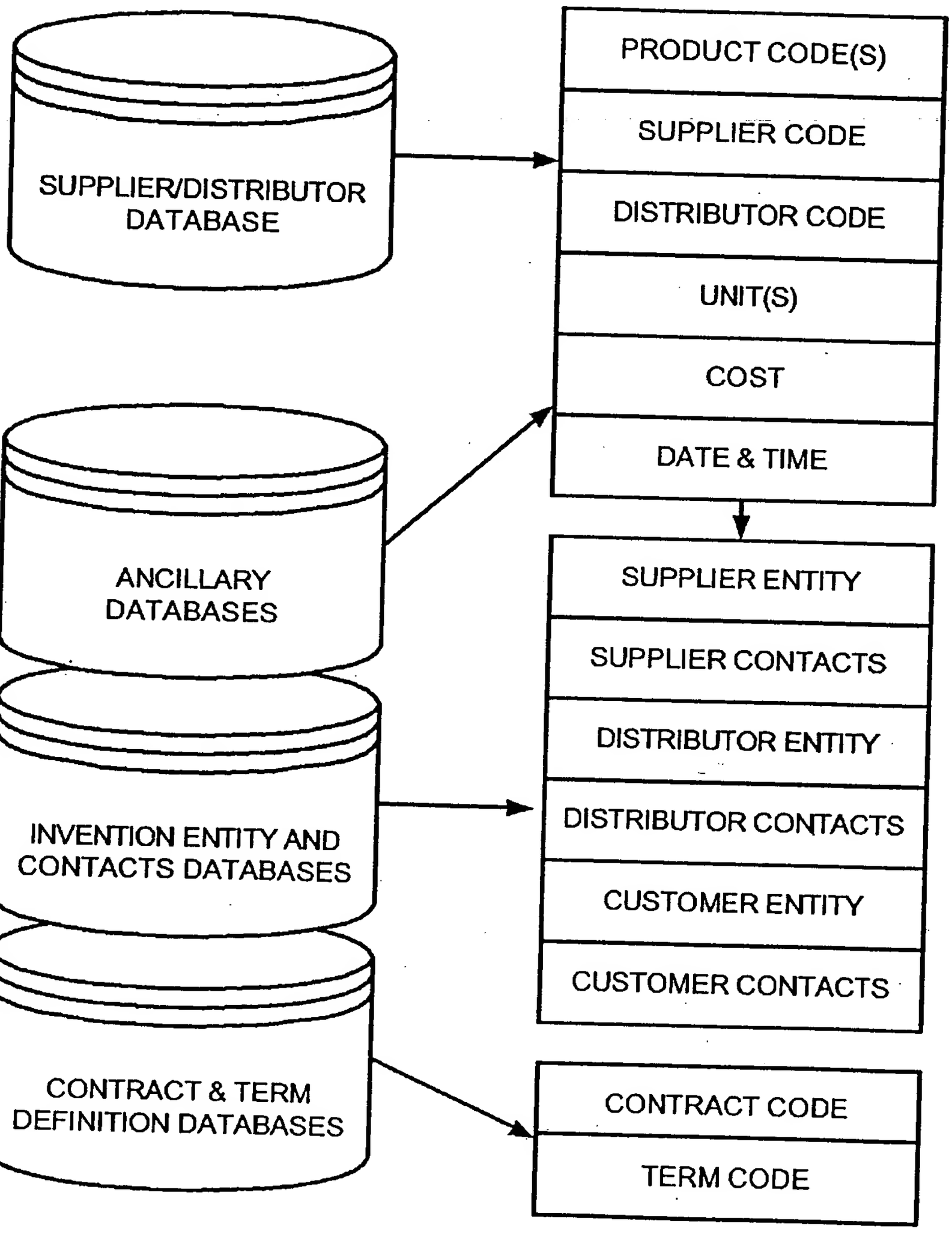

FIGURE 3.1:
INPUT CONTRACT ENTITIES AND CONTACT

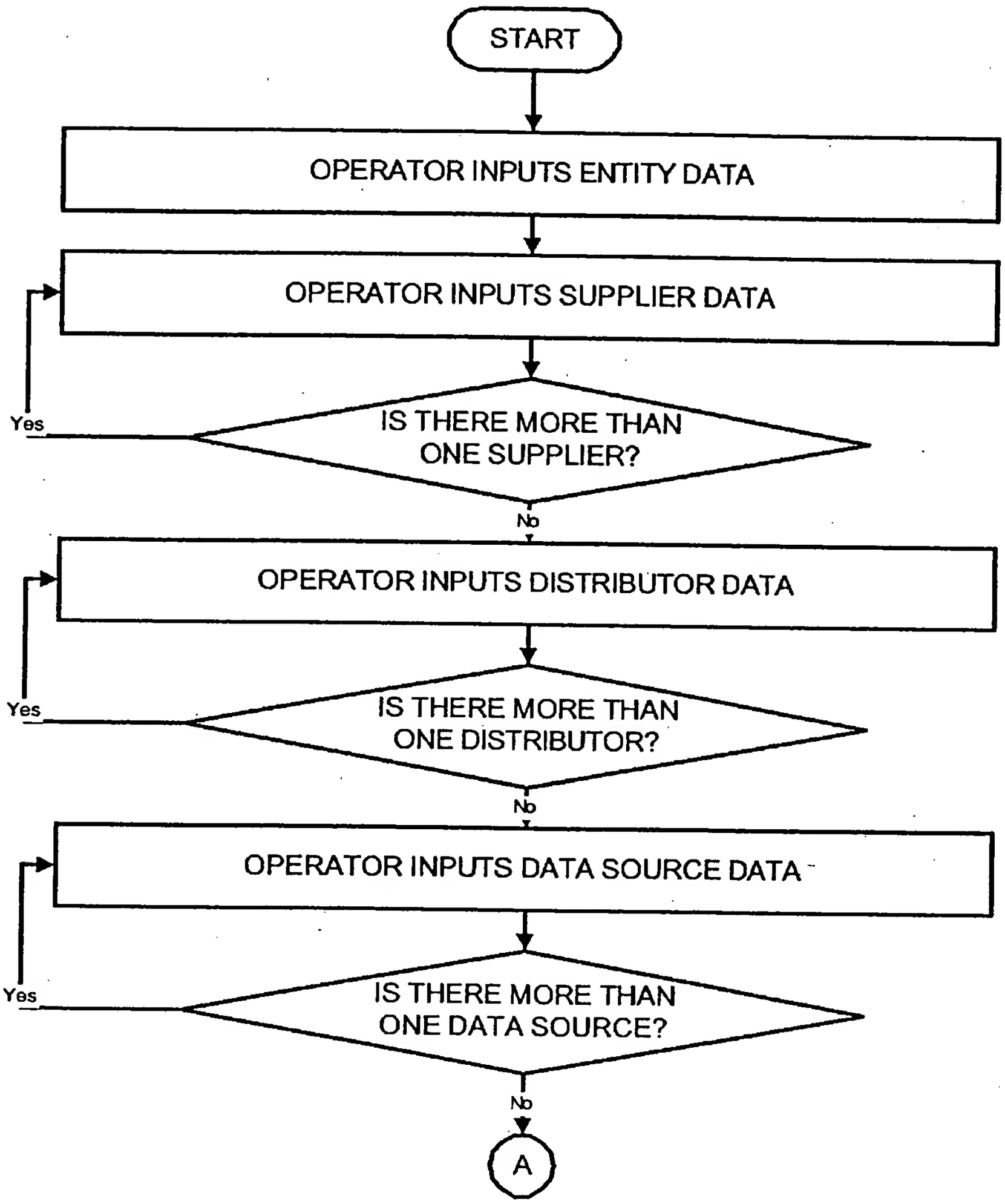

FIGURE 3.2:
INPUT CONTRACT ENTITIES AND CONTACT

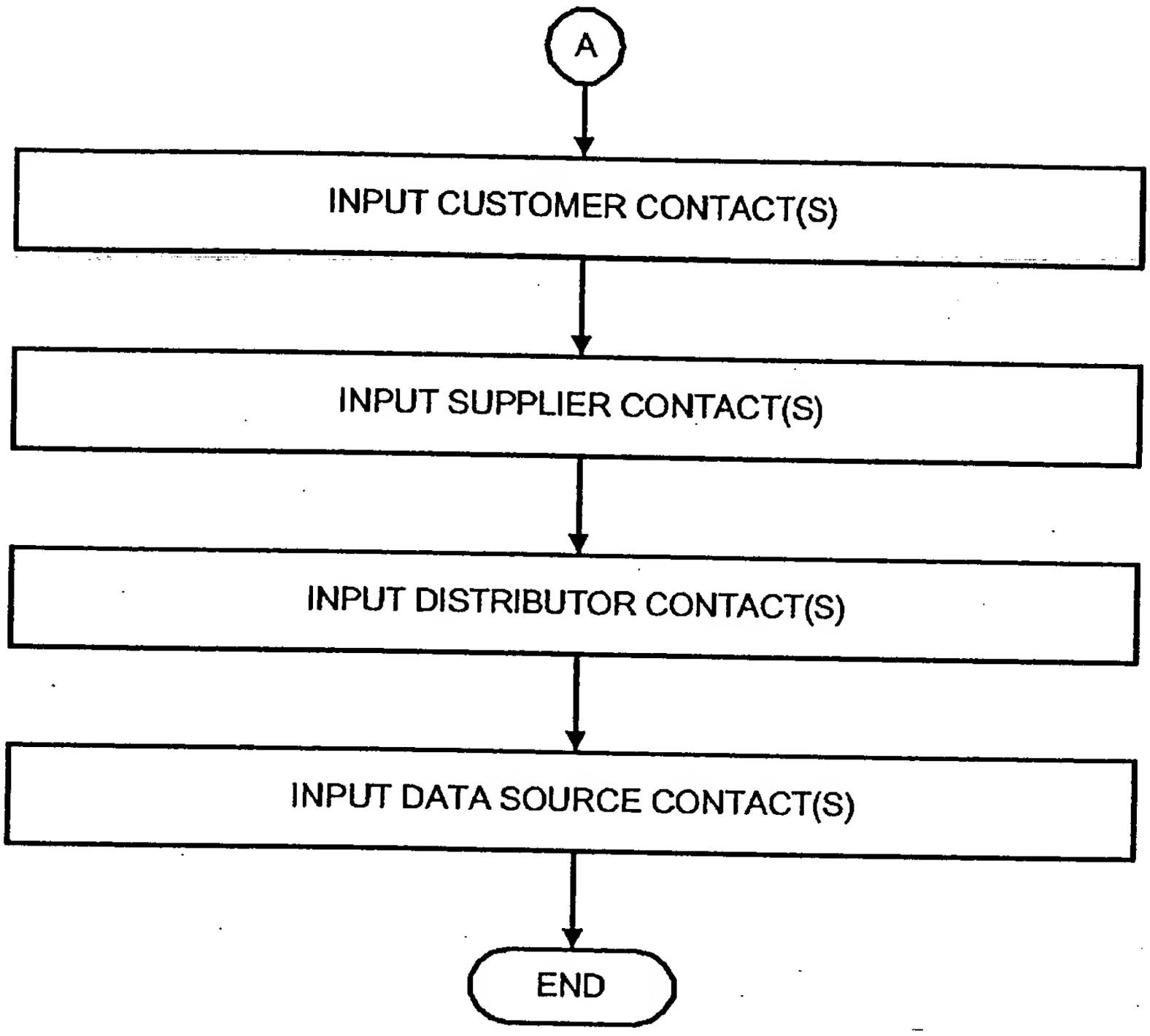

FIGURE 4:
TERM AND CONTRACT RULES DEFINITION DATABASE

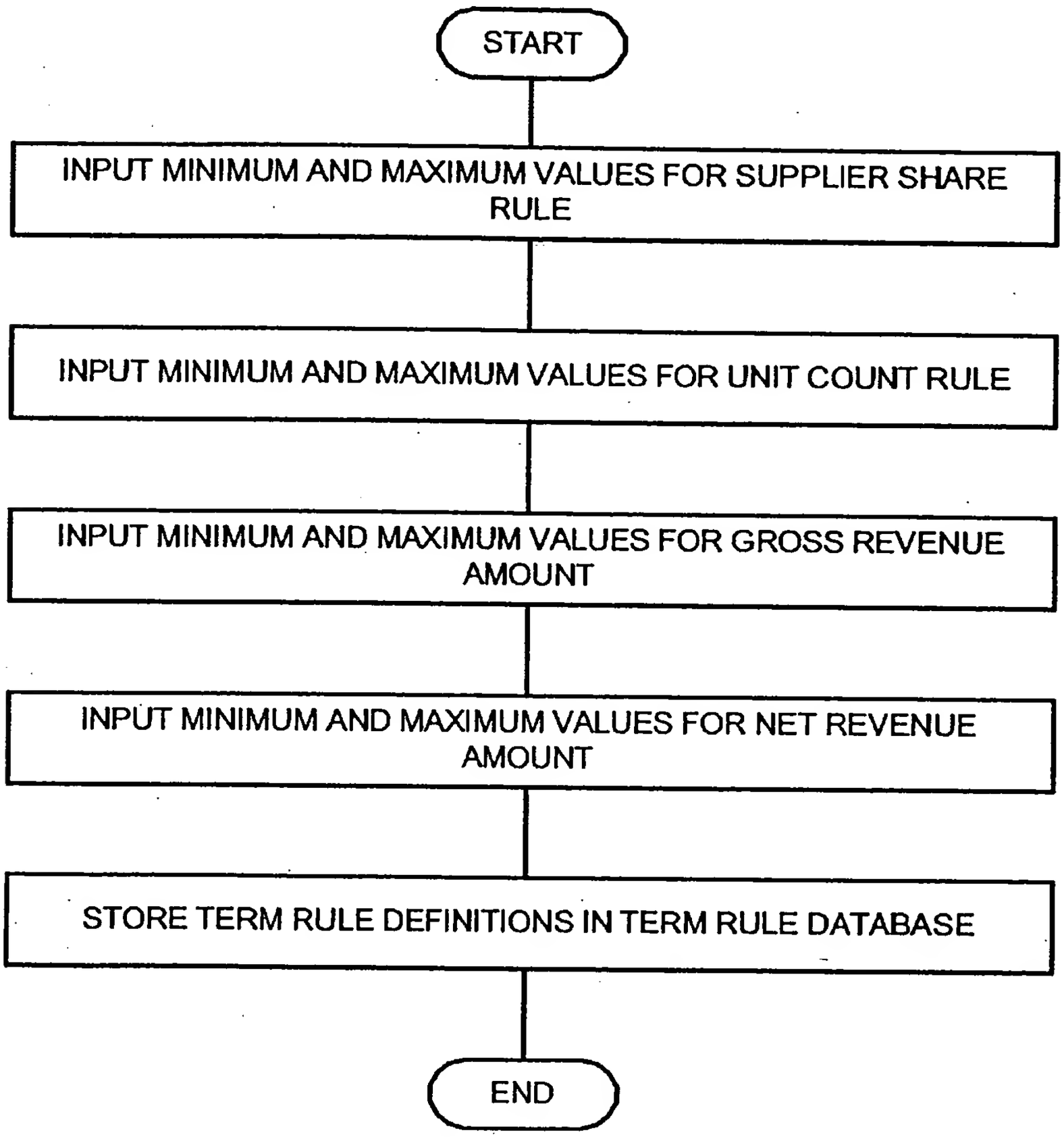

FIGURE 5.1:
NORMALIZE DATA INTO STANDARD TRANSACTION FORMAT

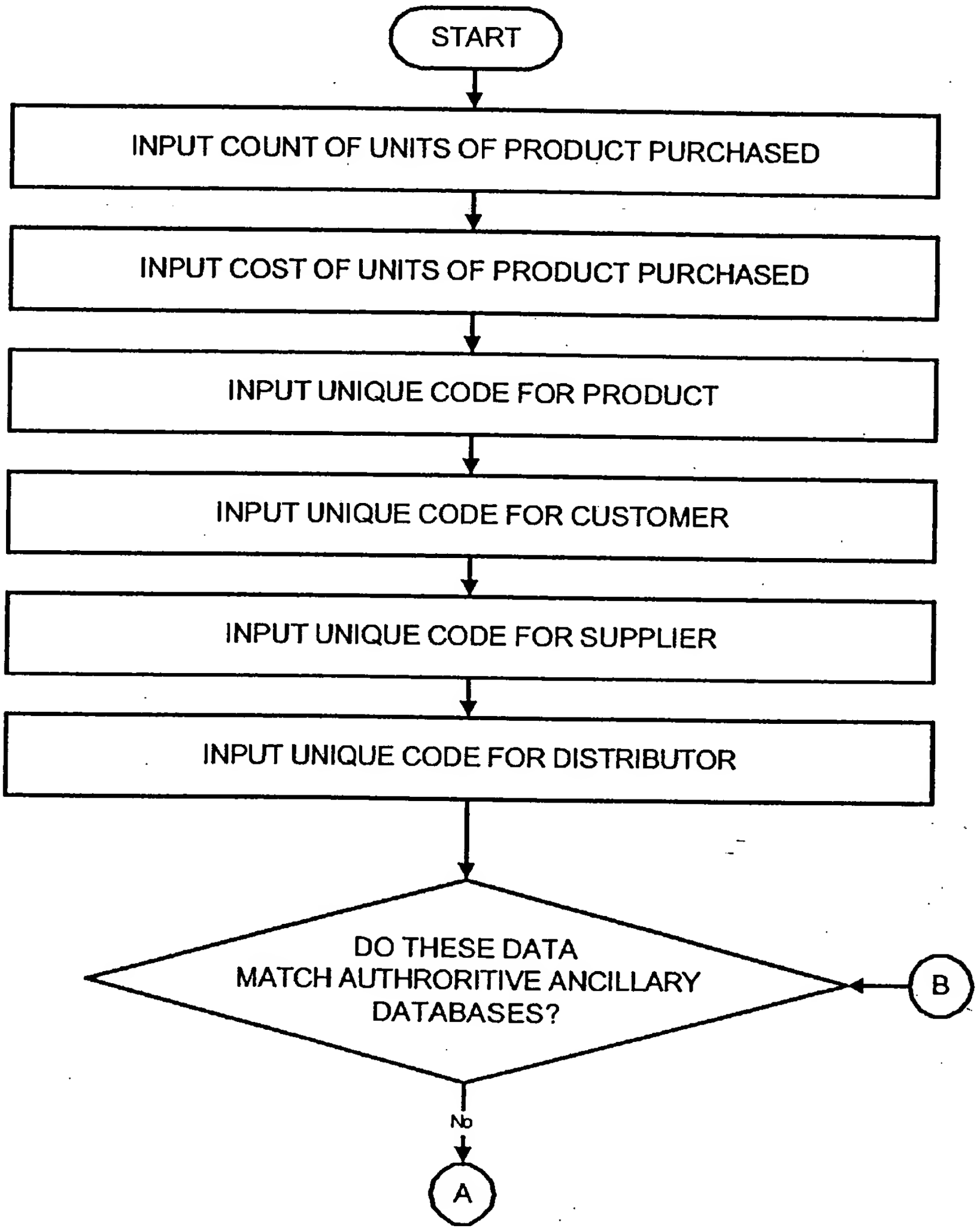

FIGURE 5.2:
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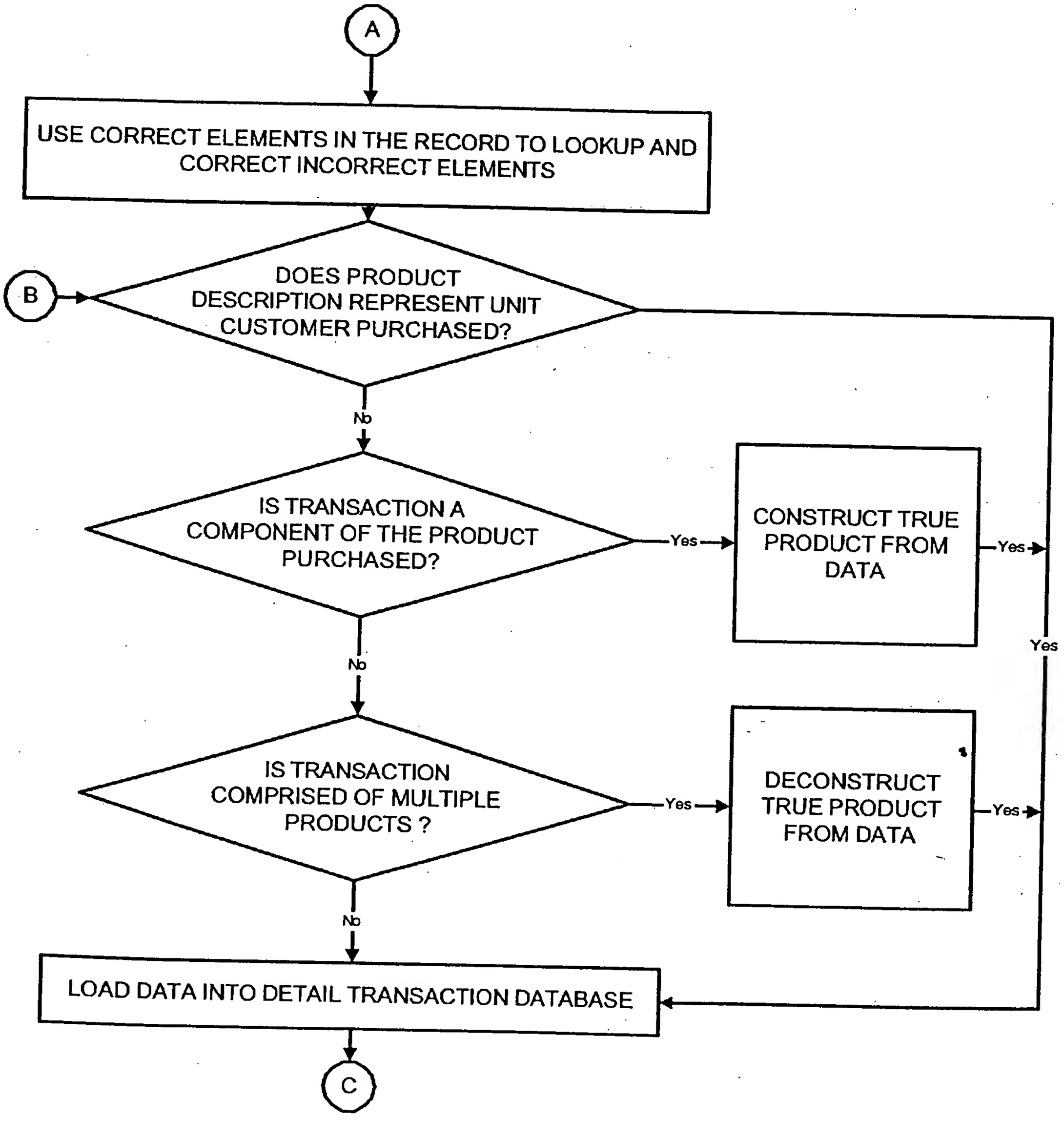

FIGURE 5.3:
NORMALIZE DATA INTO STANDARD TRANSACTION FORMAT

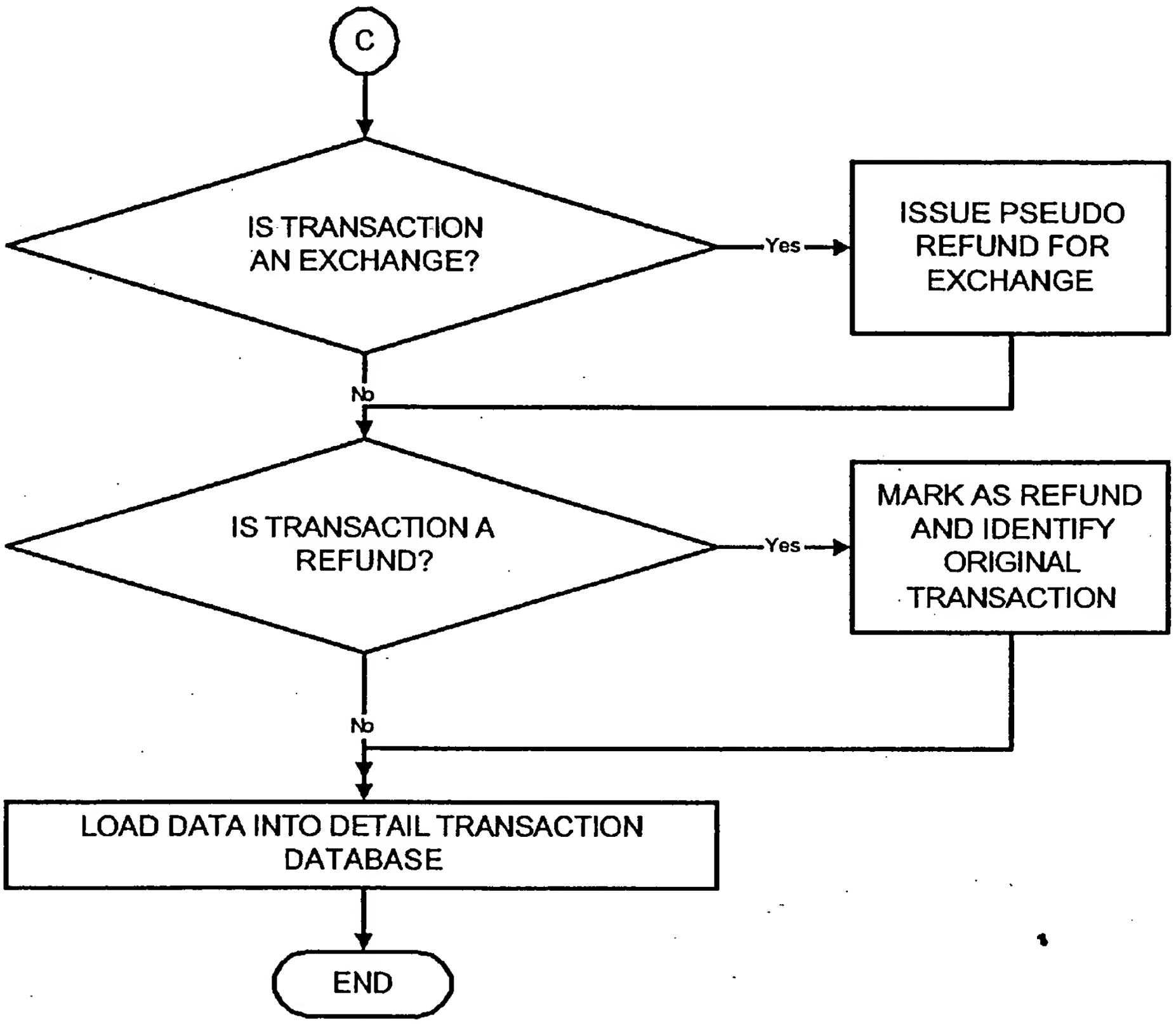

FIGURE 6.1:
PROGRAM TERMS AND FORECAST FINANCIAL PERFORMANCE

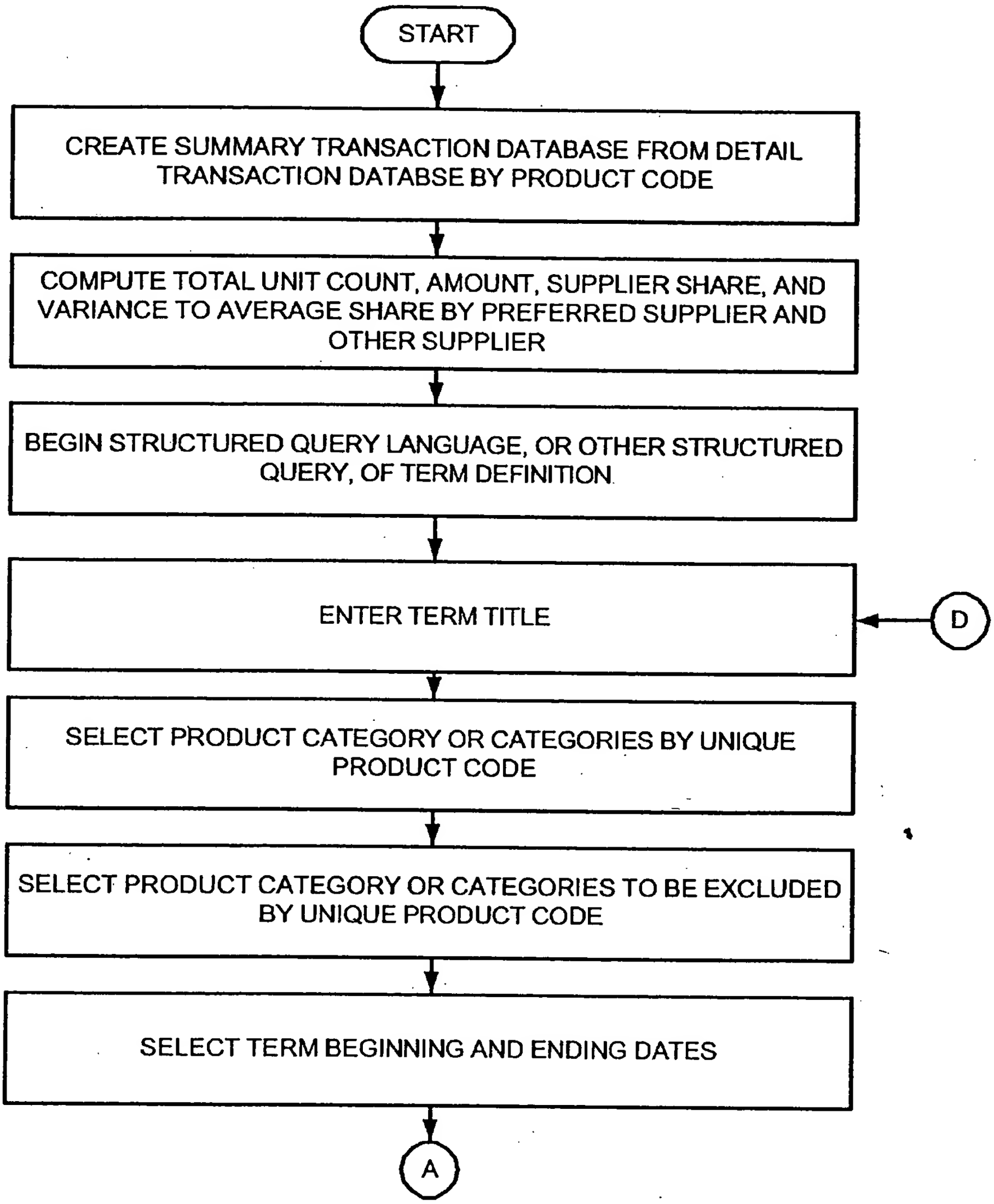

FIGURE 6.2:
PROGRAM TERMS AND FORECAST FINANCIAL PERFORMANCE

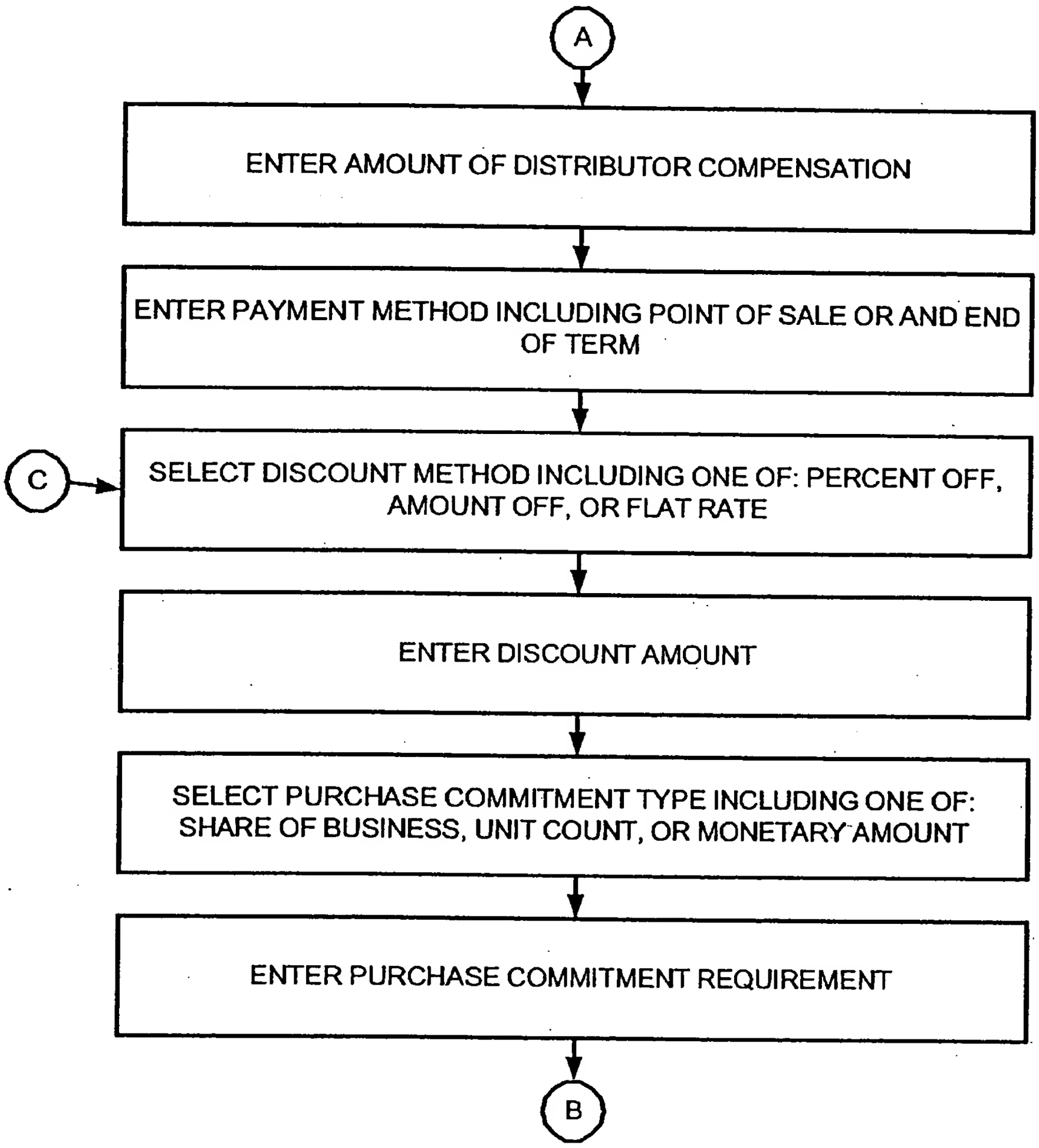

FIGURE 6.3:
PROGRAM TERMS AND FORECAST FINANCIAL PERFORMANCE

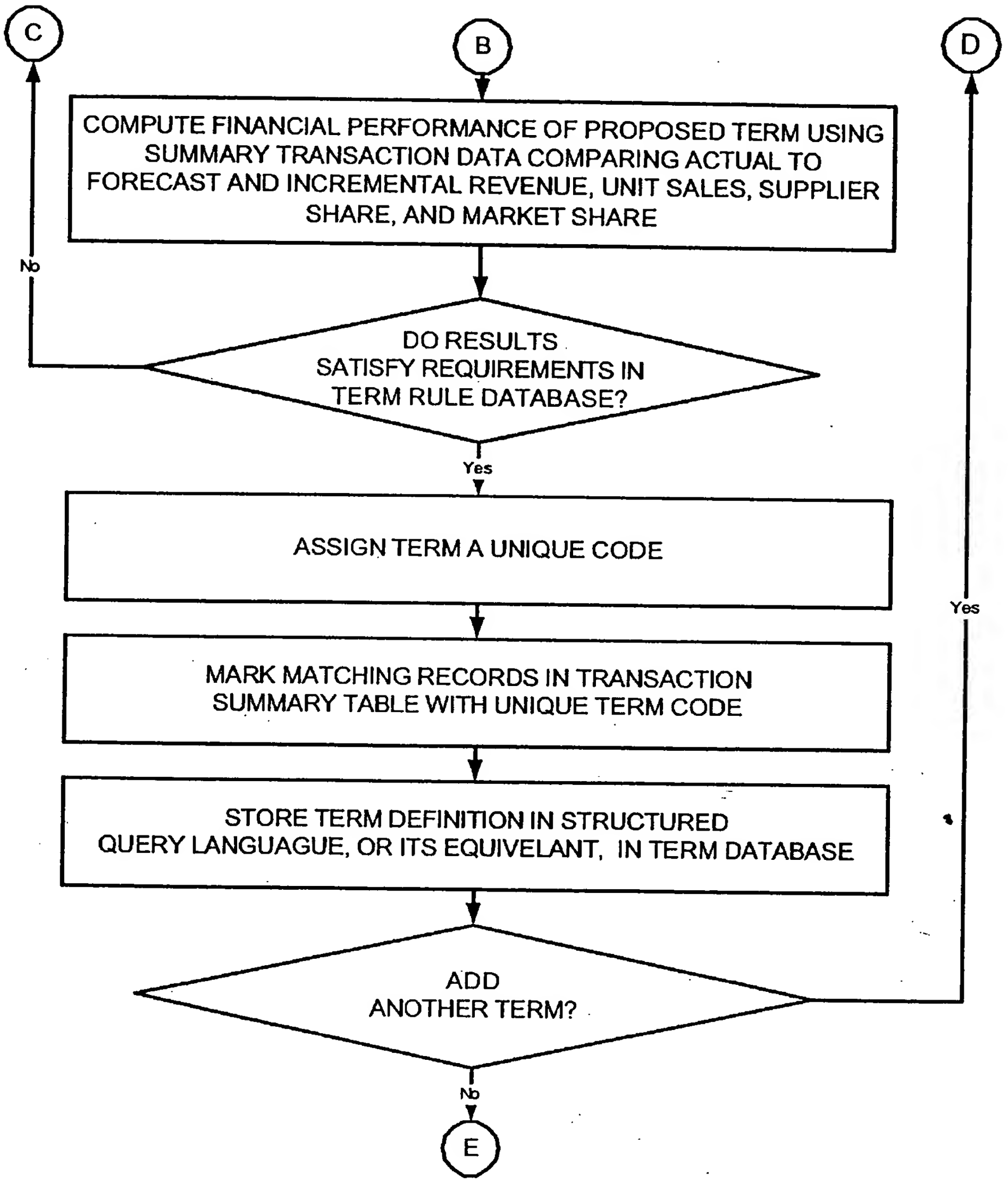

FIGURE 6.4:
PROGRAM TERMS AND FORECAST FINANCIAL PERFORMANCE

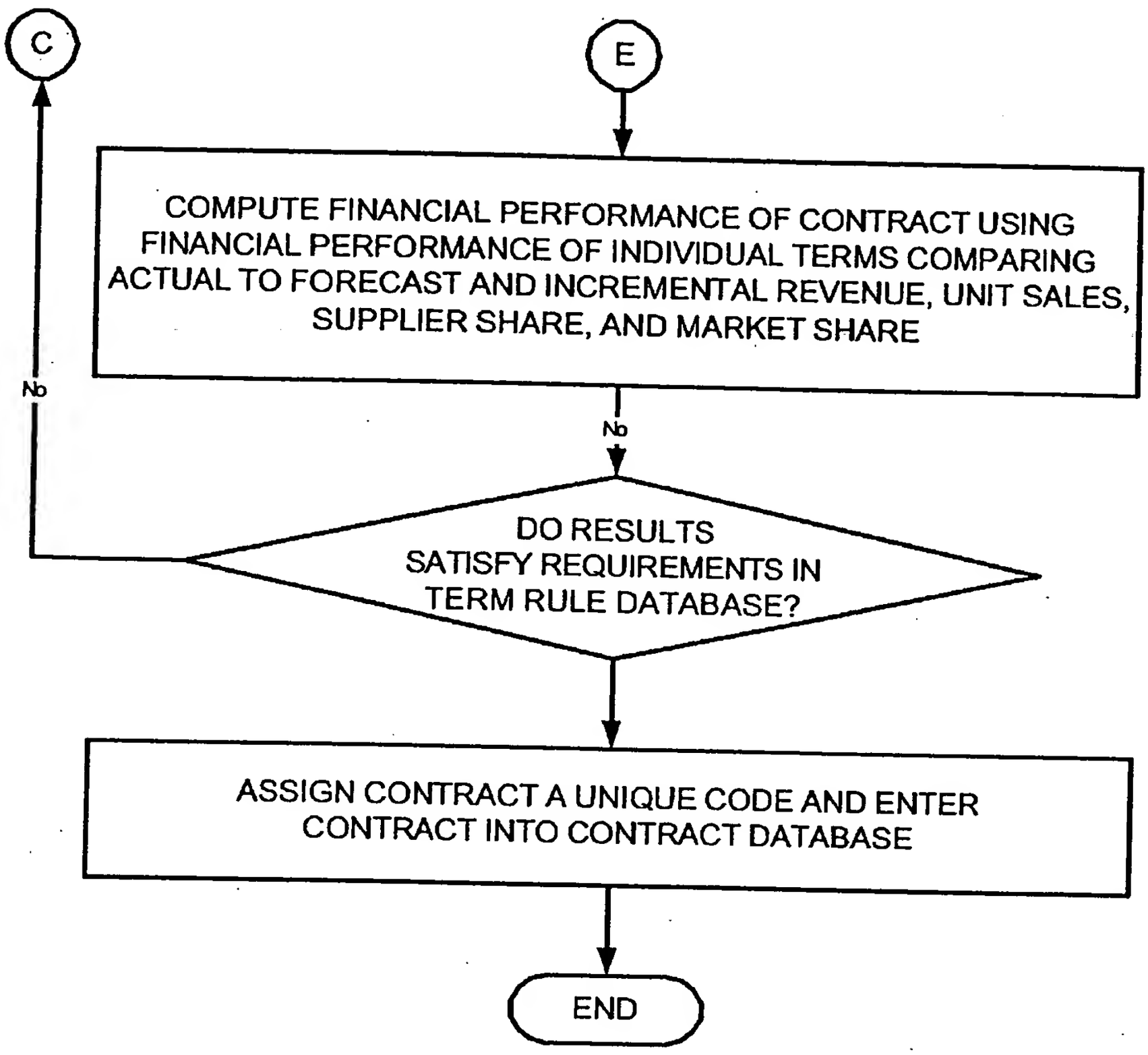

FIGURE 7:
PRODUCE CONTRACT AND TERMS SHEET

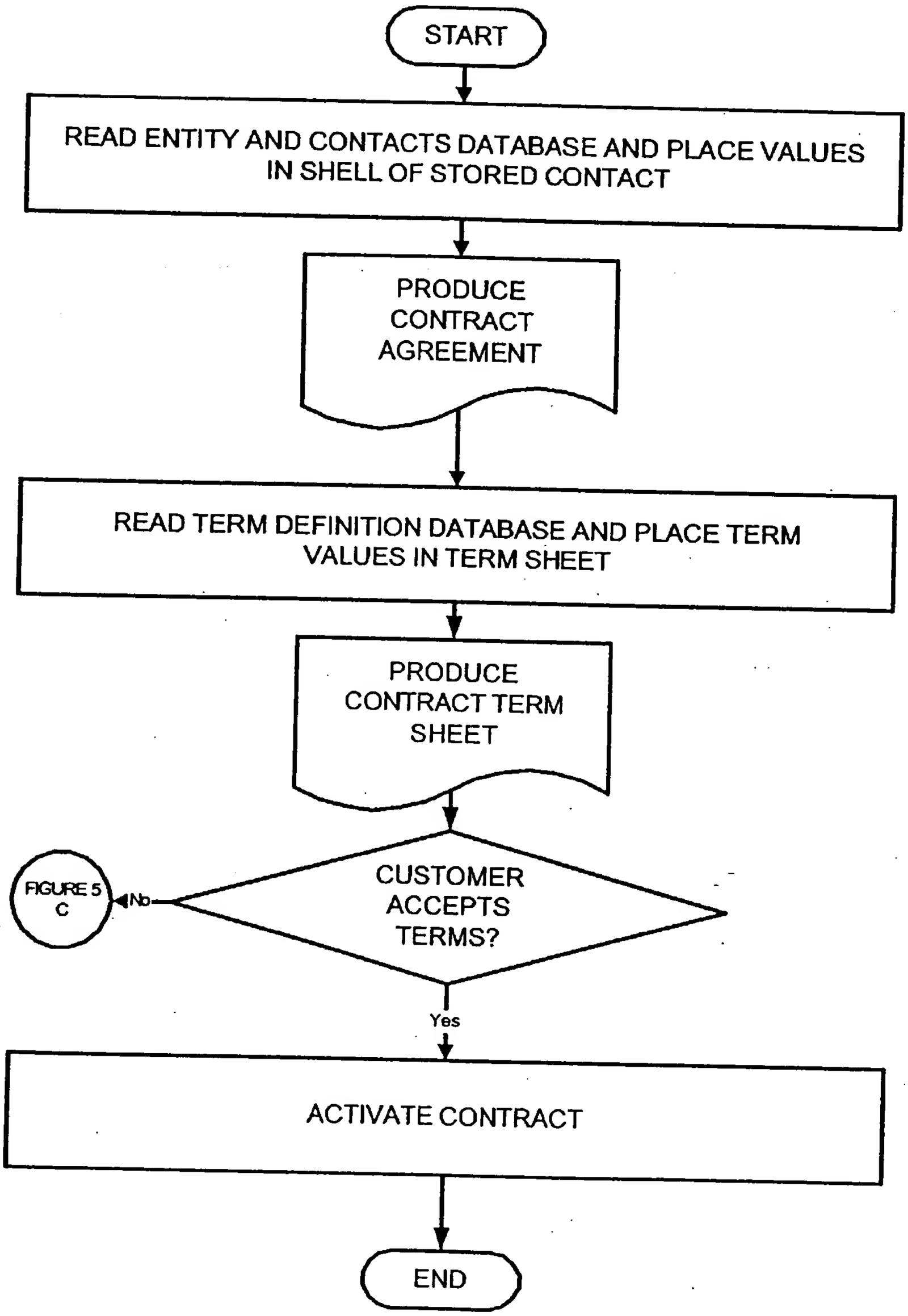

FIGURE 8.1:
MARK CURRENT TRANSACTIONS WITH CONTRACT AND TERM CODES

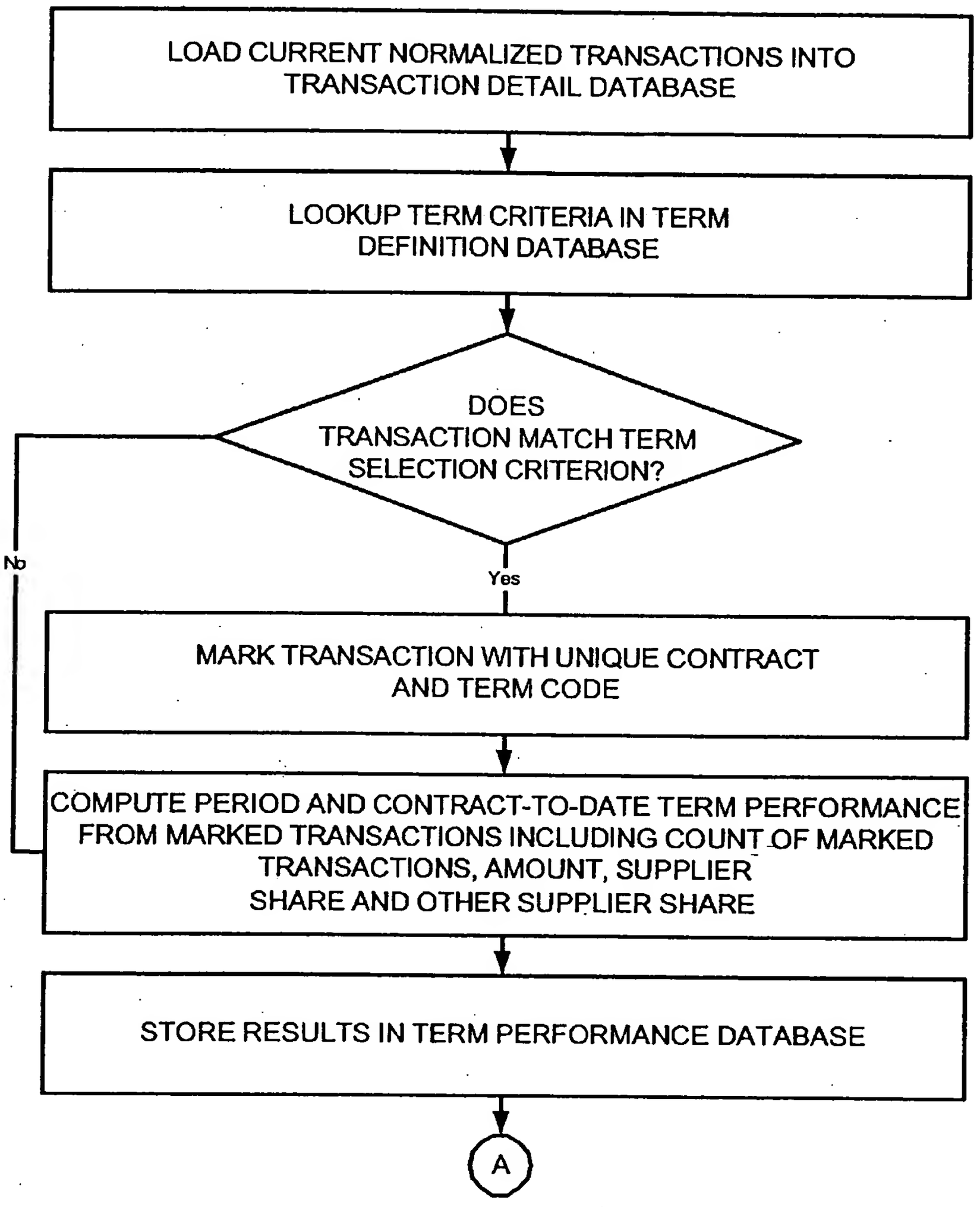

FIGURE 8.2:
MARK CURRENT TRANSACTIONS WITH CONTRACT AND TERM CODES

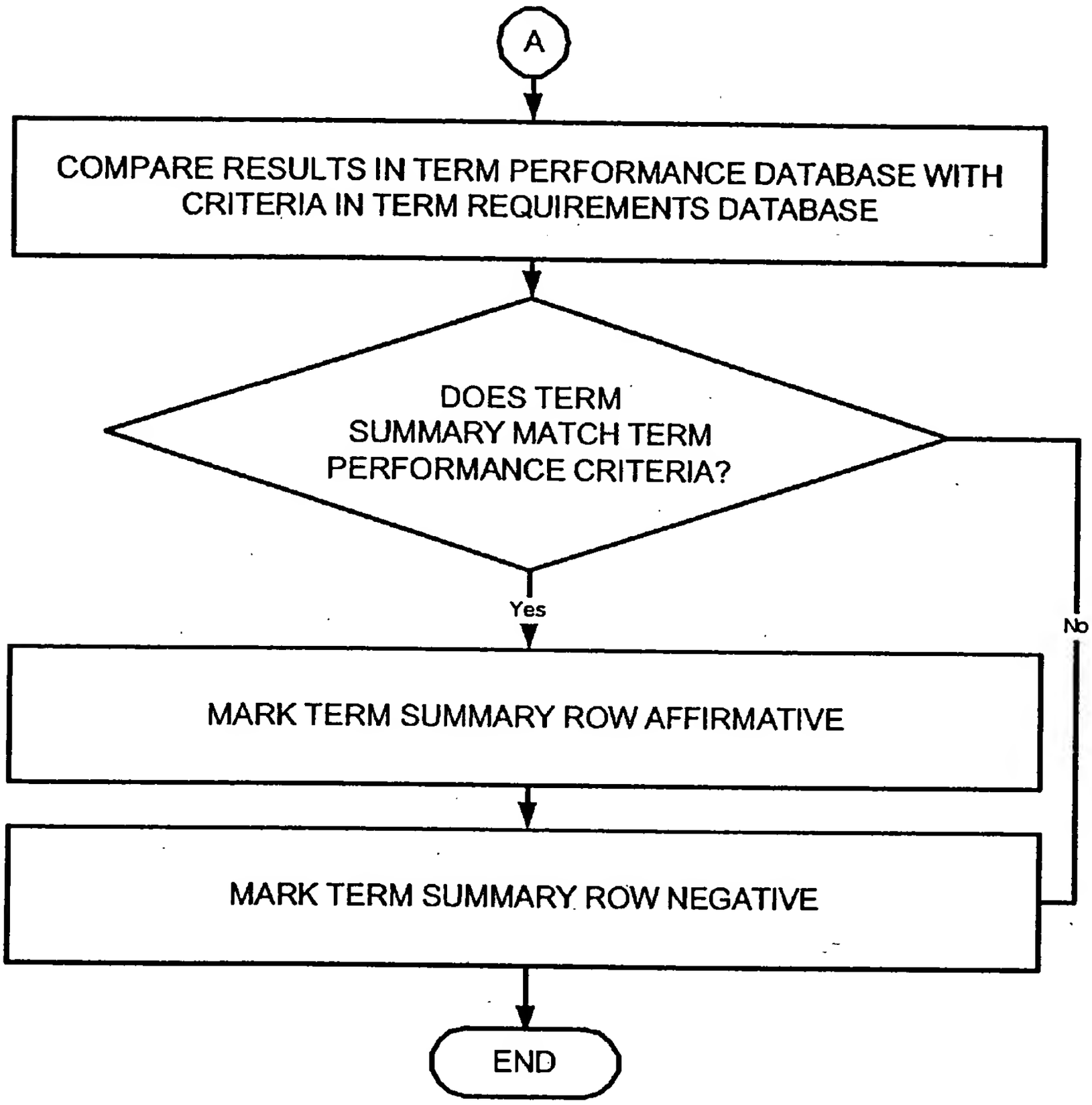

FIGURE 9:
PRODUCE AND DISTRIBUTE PERFORMANCE INFORMATION

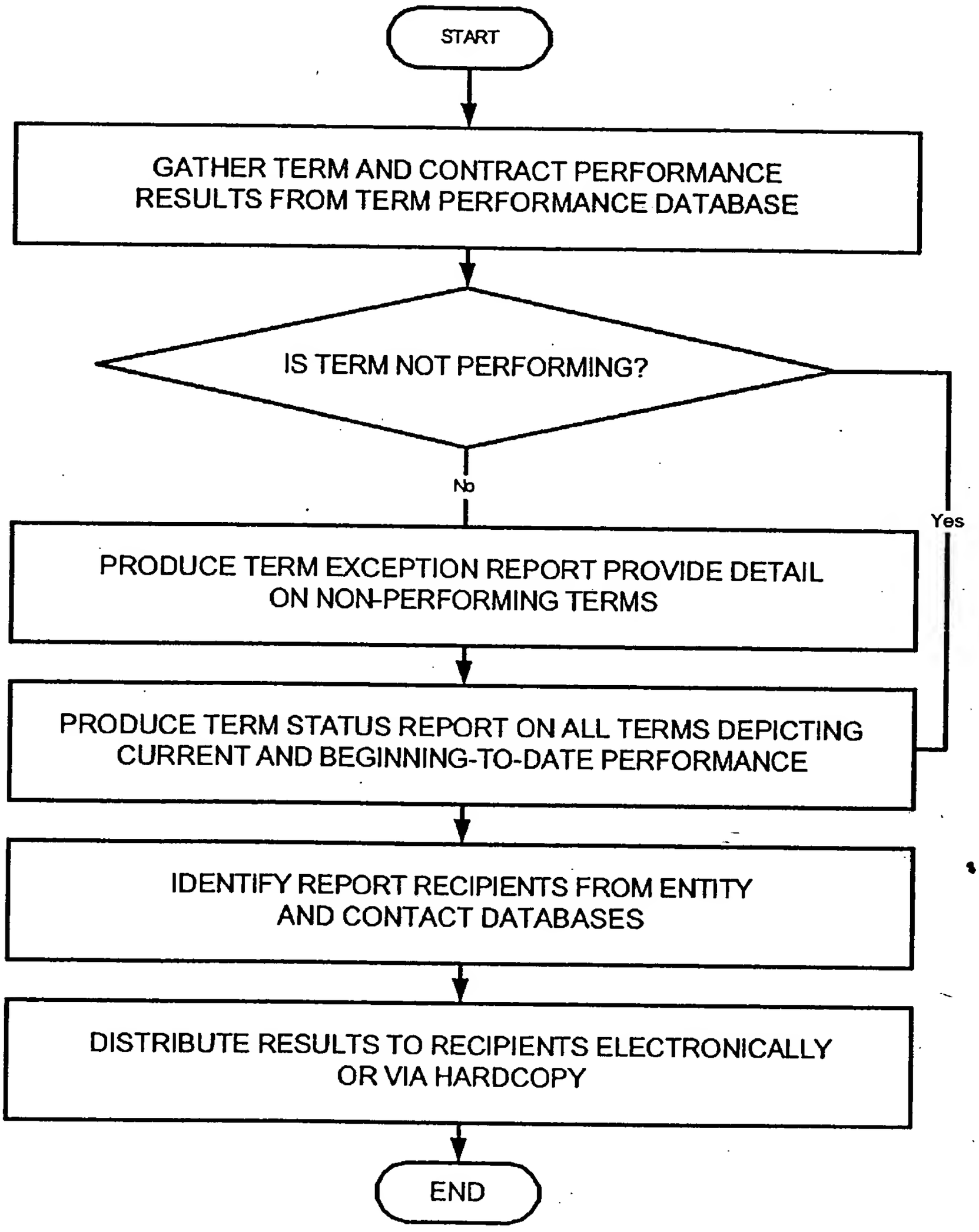

FIGURE 10:
PAYOUT DISCOUNT

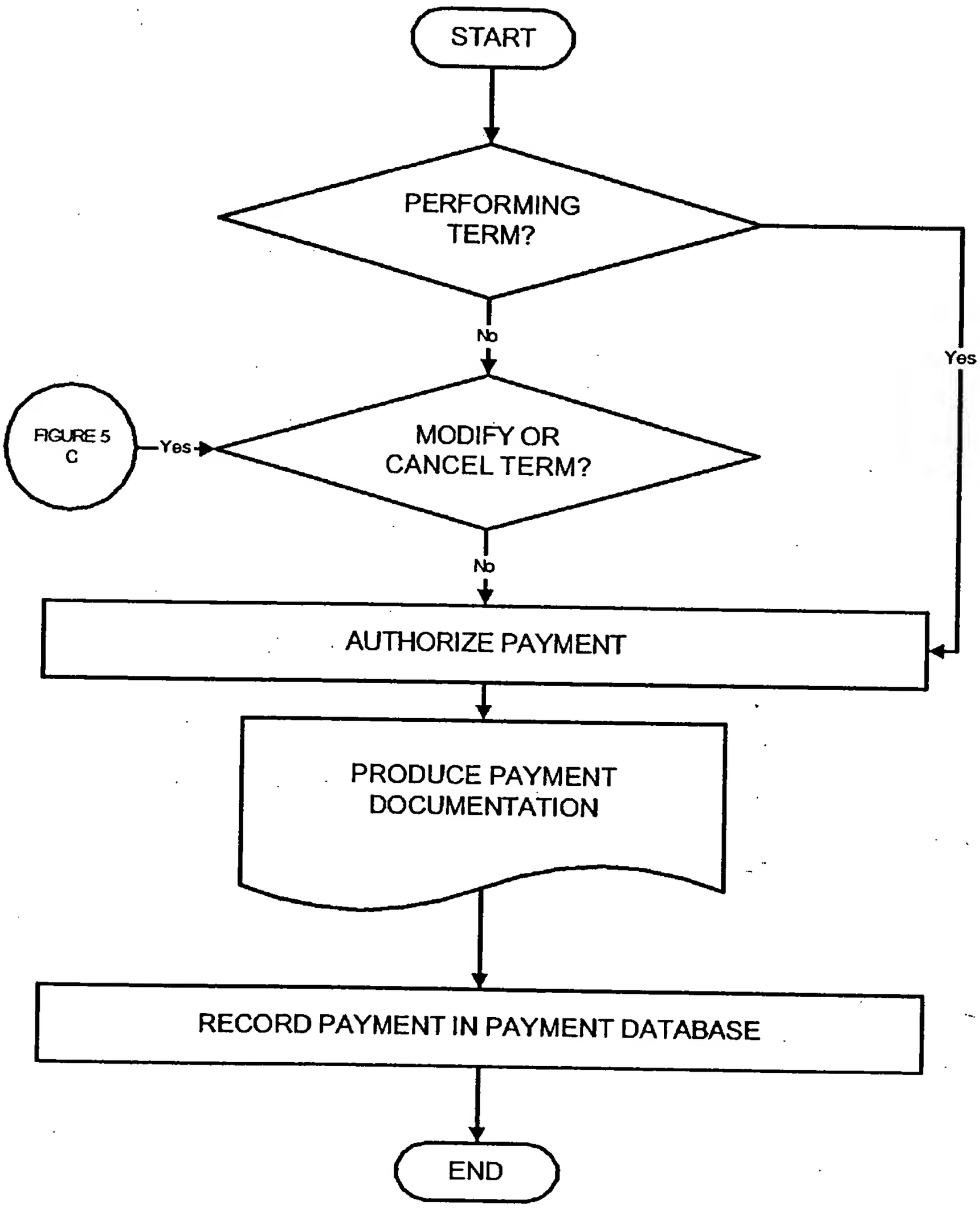

FIGURE 11:
RECONCILE TERM PERFORMANCE